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AUTHOR	Buchmiller, Archie A.
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ABSTRACT

This paper discusses how the planning, programming, budgeting, and evaluating systems (PPBES) can be individually designed to help local school districts meet their financial needs. Each segment of the system is individually described along with actual implementation. The paper concludes that adoption of such systems can enhance educational decision-making and bring about budgeting reform and improvement. (Author/LD)

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Planning-Programming-Budgeting-Evaluating Systems

(Revised)

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by

Archie A. Buchmiller, Ph.D.

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(Revised)

> . . . within our time the school has been yanked down from its quiet academic retreat on the hill, plumped down at the teeming crossroads of society's main thoroughfare where social and economic strife intersect, and given the directive, "Now you do something about all this."[1]

The observation made by the Association of School Business Officials appears to be as relevant today as it was in 1971. Inflation, finite resources, declining enrollments, and citizens' publicly expressed doubts about educational effectiveness continue to challenge the traditional role of the public schools. Proposed changes in Wisconsin's school accounting system will provide a basis for school district officials to generate new information about costs related to the performance of educational programs. This will give public officials and the general public a greater opportunity to evaluate programs and new proposals about how well they meet local needs as well as to make more rational decisions about the allocation of resources. Planning, programming, budgeting, and evaluating systems (PPBES) can be individually designed to help local school districts meet these needs.

PPBES has roots that reach back to the early 1900s when unit cost analysis and scientific management were proposed to improve educational decisionmaking. During the 1920s, some authorities advocated educational budget reform in order to enhance public understanding and improved decisionmaking. World War II was accompanied by the development of new technologies, such as systems analysis, linear programming, and cost-benefit analysis, that were effective in winning the war. In 1965, President Lyndon Johnson ordered federal agencies to adopt PPBES as the federal budgeting strategy. A review by the Cooperative Accountability Project[2] revealed that by 1973 seven states had enacted legislative requirements to utilize PPBES, MIS (management information systems), or uniform accounting systems in education. These processes, combined with minimum competency assessment, are new tools which educators may use to assess educational effectiveness. This background demonstrates that PPBES has already had considerable influence on state and federal administrative practices. As a result, many federal and state programs require that grants, contracts, and applications specify goals, objectives, demonstrated cost effectiveness, evaluation methodologies, and reports as prerequisites for project approval. There is continued pressure to collect and report more information to state, federal, and legislative agencies and their staffs in spite of efforts to reduce paperwork. The House

of Representatives Committee on Education, in a technical report on H.R. 69, provides a representative point of view for more and better information:

> The Committee believes that this lack of uniformity of evaluation practices has been a major failing of the U.S. Office of Education. Federal administrators, many years ago, should have exercised decisive leadership in encouraging States to develop and require uniformity of evaluation among local school districts; and O.E. should have also encouraged the States to use uniform measures of evaluation among themselves.[3]

Even though the pressure for budgetary changes can be traced to the early 1920s, traditional school accounting practices resisted such pressures for many years. In 1973, the U.S. Office of Education published its current financial accounting handbook, *Financial Accounting: Classifications and Standard Terminology for Local and State School Systems.*

Wisconsin's proposed school accounting system is designed to accommodate flexible methods of educational accounting which will supply more information about revenues and expenditures in addition to objects of expenditure. The proposed system also provides for a transition between line-object accounting systems and PPBES. Some states have already adopted the new system, often with state financial assistance and support. The Wisconsin Department of Public Instruction's Division for Financial Aids Services is piloting a new functional accounting system in 1979-80 with a targeted date for statewide implementation during the 1980-81 school year. Because of these recent developments, it seems likely that school district officials may find it useful to reexamine the PPBES basics in this bulletin.

PPBES As A System

Planning-programming-budgeting-evaluating systems are designed to provide a coordinated approach for educational decisionmaking and operations. In addition to revenue and expenditure data, they are designed to answer other questions, including:

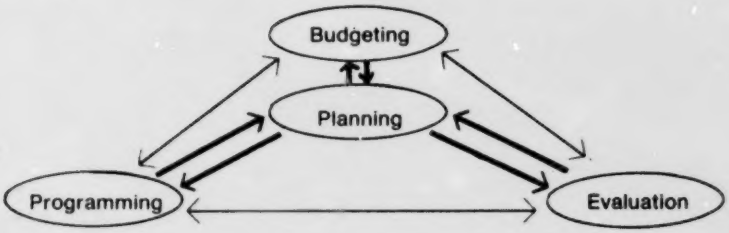
— *What* kinds of activities shall we spend resources on?
— *How* will we spend resources?
— *How well* have we achieved educational goals and objectives?
— *What can we do to improve* educational effectiveness and efficiency?

The systems methodology of PPBES requires the development of new skills, a more precise terminology and technology, involvement of new participants, and a strong commitment to engage in planning and evaluation activities which use objective analysis of issues and alternatives for decisionmaking. It should be emphasized at the outset that the adoption of PPBES technology does not require an "all or nothing" approach. It may even be desirable that such systems be phased in slowly, allowing for a transition from current budgeting practices. It is also necessary that adequate staff training precede the development and installation of such systems.

A planning-programming-budgeting-evaluating system may be conceived as an interactive, interrelated process which uses planning and analysis as its major tools. The end products of planning must be sound information and alternatives if the system is to improve decisionmaking. The centrality of planning in PPBES is illustrated in Figure 1.

Figure 1

A PPBES Model



Each of the components (planning-programming-budgeting-evaluating) is composed of a number of subsystems which will be discussed briefly.

Planning

Planning is a continuous, interactive process which is prerequisite for carrying out activities involved in the programming, evaluating, and budgeting phases. Its effectiveness can be judged by the degree to which the other elements interface smoothly and accommodate activities in each of these stages. Planning includes a series of activities, such as:

—problem and/or needs identification
—policy development
—program description and specifications
—program evaluation and assessment
—alternatives development
—initial resource allocations

Planning is only as good as the analytic methods used to develop alternatives and to predict their impact. Analysis generates information to provide officials with a scenario of predictable consequences which can be considered in making decisions about alternatives. Together, these processes result in what may be called a super information system to predict, monitor, and evaluate operational plans. During actual implementation of selected alternatives, predetermined criteria and methods generate the informational feedback to determine whether the process is going as planned and when adjustments must be made to improve performance.

Planning activities, especially the development of controlling policies, needs assessment, and establishing priorities, should involve persons who are representative of the community in order to achieve a consensus about needs and priorities. Such a consensus helps avoid narrow solutions and biases, which is important, because subsequent activities and resource allocations all flow from these initial considerations. The planning task force must have full access to all available information and be supported by technical staff and experts needed to carry out its functions. It is important that the relationship of the planning task force to administrative officials and boards be clearly established at the outset in order to avoid conflicts between them and to avoid institutionalizing such committee structures.

One of the most important activities in planning is to establish the educational needs, goals, and objectives of the school district. Written goals and objectives focus attention on the primary purposes of the schools to meet community and human needs and provide the basis to monitor and evaluate operations as well as to identify problems and/or establish priorities. Once major goals, priorities, and/or needs are identified for the school district, performance goals and objectives can be established and activities selected to attain outcomes specified in these objectives. Existing program goals and objectives can be modified to reflect changes which analyses have indicated would better meet expectations or improve performance. Written program descriptions, specifications, and activities are the products of the planning phase and will be further refined during the programming phase as well as in the development of performance monitoring and evaluation components. The initial decisions are also used as the basis for the first tentative allocations of resources which later will

be fine tuned with greater specifications and accuracy in the budgeting phase.

A great deal of importance has been placed on the analysis function in the planning phase of this discussion. Analysis can range from very simple resource inventory lists to complex, technical cost-benefit studies. Generally, the more complex the methods, the greater the demands for specialized skills and time. It must be stressed that the expectations for sophisticated analytic processes should not exceed the capability of available human resources to carry them out. Nothing discredits PPBES so completely as flawed reasoning and faulty information which result in poor decisions and implementation plans that don't work. The best test for effective analysis is not the sophistication of processes but rather how the information can be used to establish policies, provide guidelines, and make decisions essential to carry out the subsequent steps in the system.

Essentially, the planning process must produce clear written goals and objectives, identify needs and problems in relation to them, generate alternatives to better meet needs, establish policies and minimum specifications for programming and evaluation, determine the initial allocation of resources, and select a methodology to monitor and evaluate operations.

Programming

The programming phase fine tunes the initial decisions and information about goals, needs, and priorities to create an integrated whole from the separate parts. It results in a written descriptive plan which is designed to achieve specific predetermined outcomes. At a minimum, this plan will include performance objectives, procedures and activities, performance criteria, activity sequences within established time frames, monitoring and evaluation methodologies, and initial program resource allocations.

Programming also provides the basic framework of program and subprogram structures to which resources will be allocated. The subprograms specify the performance objectives and products or behaviors to be attained. For example, a program called literacy skills could be specified, and subprograms could be identified as reading, language, etc. Each would specify activities to be undertaken to achieve the objective, and different alternatives can be analyzed and decisions made in regard to outcomes and costs.

It is important that the written program plan can be easily communicated to various publics whose support is necessary for implementation. Plans

that do not communicate well or which do not build upon the earlier consensus developed in planning will in all likelihood become vehicles of misunderstanding and conflict. Program plans which cannot be readily implemented encourage the substitution of goals, activities, and outcomes by operating level administrators which often have the effect of changing decisions about program outcomes and projected costs. It is easy to develop a readable plan. The most important test is to develop one that works.

When completed, the program plan tests the feasibility of a first rough fit between expectations, activities to meet them, and adequacy of resources to carry them out. Given a reasonable fit, the second stage will be to fine tune the initial plan using common format, styles, and organization with the additional details and specifications necessary to make it operational. The program plan activities must include specifications and details which are useful in allocating resources. Under PPBES, resources are allocated to activities which are designed to attain specified performance levels. Activities are the resource-consuming vehicles of the plan. They also prescribe performance criteria which will be used to obtain information to monitor operations and to determine whether or not events are proceeding as planned to achieve predicted results.

Any plan, no matter how meticulously developed, is not likely to be implemented without modifications or adjustments. Monitoring activities produce much of the data and information needed to evaluate performance, including making judgments about the *efficiency* of the process and the *effectiveness* of attaining desired outcomes.

Programming is a continuation of the analysis and decisionmaking first initiated in the planning stage. For example, the tentative resource allocation in the initial program plan may indicate that resources are inadequate to achieve the full expectations of initial decisions. This will then require reanalysis of alternatives, perhaps with the result of changing priorities or reducing expected performance levels. Programming harmonizes expectations, activities, and resources and in a sense is the final feasibility test prior to the budgeting phase.

Budgeting

The budgeting phase in PPBES is an outgrowth of prior planning and programming activities and decisions. The emphasis is upon programs rather than objects of expenditure and is intended to result in a more systematic and rational process to allocate resources to clearly articulated needs and priorities. The allocation of resources to programs implies that managers,

if given the authority, have the flexibility to reallocate funds between program elements as needed to achieve targeted performance levels for subprograms and activities. The allocation of resources is examined within the framework of multi-year time frames which encourage managers to make short-term program and budget decisions with long-term implications in mind. Hopefully, this will discourage the introduction of programs which result from current fads or interests of pressure groups. The assignment of resources to programs also permits cost-benefit or cost-performance analyses, because performance data are output and process oriented. These data can be analyzed in terms of benefits attained and resources required, thus accommodating highly selective analysis and decisionmaking in respect to both process and level of output desired.

The program and budget plans are the subsystems that generate information to provide feedback to managers for continuous monitoring and review of operations. Performance and cost indicators of these subsystems can be tracked over long periods of time and thus alert managers about changes that need to be made. This information can also be given to planning task forces for reexamining program and systems performance in planning for future budget cycles. For example, the cost of attaining a reading achievement goal within or with less than planned resources is more important that knowing the specific expenditures for salaries, fuel oil, electric energy, maintenance, or capital. Changes in the level of allocated resources can be treated as experiments to determine the effect resources have on performance. This kind of control, emphasizing highest performance at lowest cost, is often labeled productivity improvement.

The program plan also provides the basis for developing the financial chart of accounts for tracking expenditures. From the basic program accounting system, crosswalks can be generated for specialized analysis and reporting and to permit comparison to past expenditures. Figures 2 A-C are a representative example of a functional revenue and expenditure system.

Under PPBES, the anticipated costs are related to programs and objectives rather than traditional object expenditures which are often submerged in subprogram data. Both program and object classification costs can be tracked or retrieved as desired to evaluate program cost effectiveness and provide for administrative controls on the expenditure of resources.

Figure 2 A

An Example of
A Chart of Accounts—Revenues

Type	Location	Source
General Fund	Elementary Schools	Interfund Transfers
Special Projects	Middle Schools	Local Revenues
Debt Service	Junior High Schools	State Revenues
Building	Senior High Schools	Federal Reserves
Food Service	Noninstructional Sites	Nonrevenue
Pupil Activities	Other	Transactions
Community Services		Other
Other		

Figure 2 B

An Example of
A Chart of Accounts—Expenditures

Function	Program/Project	Expenditure Objects
Instruction (by	Special Programs	Salaries
grade & subject)	Federal Title Programs	Employee Benefits
–Regular (K-12)	Community Projects	Purchased Services
–Vocational	Other	–Professional
–Co-curricular		–General
–Special Education		–Utilities
–Adult Education		Travel
Support Services		Communications
General Administration		Data Processing
School Administration		Educational Services
Business		Non-Capital Objects
Administration		–Supplies
Operation		–Media
Maintenance		–Equipment
Facilities		–Resale
Acquisition		–Repair
Pupil Transportation		–Etc.
Food Services		Capital Objects
Internal Services		–Sites
Central Services		–Buildings
Community Services		–Equipment
Nonprogram		–Vehicles
Transactions		–Etc.
		Debt Retirement
		Insurance
		Transfers
		Other

Figure 2 C
An Example of
A Chart of Accounts—Supplementary Information

Fiscal Year Indicator	Assets/ Liabilities	Activity	Grade
1979-80 1980-81 Etc.	Assets Liabilities	Academic Athletic Music Etc.	Grade 1 Grade 2 Etc.

Instructional Method	Position or Employment Classification	Race	Sex
Lecture Laboratory Etc.	Official Professional Technical Etc.	American Indian Asian Hispanic Black White Etc.	Female Male

Evaluation

While planning, programming, and budgeting usually have been considered as the principal components of PPBES, the trend is to specify evaluation as an integral part of these systems. If evaluation is to be effective, it cannot be considered as an independent or after-the-fact requirement or activity. From the very beginning, PPBES planning, goals, and objectives provide the basis for evaluation; every targeted performance level, activity, or monitoring checkpoint provides additional criteria for evaluating the effectiveness of processes and outcomes. Evaluation is designed to answer the question, "How well are we doing?" Planned evaluation methodologies provide managers with a means to obtain information which enables them to answer other than, "I don't know." Programs may be evaluated from many approaches—from descriptive status assessments to cybernetics. The central purpose for any methodology is to produce useful information.

Evaluation data and information provide managers with the capability to adjust and make changes. During the implementation phases of PPBES, predetermined performance data are collected and compared with predicted levels at specified points. This information gives managers timely feedback to make changes which are likely to optimize results. The evaluation design should include at least three components: (1) monitoring operations to produce information, (2) evaluating the efficiency of processes, and (3) evaluating the effectiveness of outcomes. First, it is important for managers to know whether performance is being attained as predicted. Second, process evaluation is important, because efficient resource consumption is a primary responsibility of managers. The greater part of productivity and efficiency is attained by improving processes to increase output. The third purpose of evaluation is to quantitatively and qualitatively measure the product or outcome in order to judge how effectively goals were achieved. There is an increasing trend to specify qualitative and quantitative characteristics about knowledge, skills, and behaviors acquired by students as a part of the data to be collected. While a great deal of controversy surrounds such assessment, it is not likely that it will deter the general public from wanting to know more about educational operations.

Scarce resources, inflation, and declining enrollments are only a few of the contemporary public concerns which encourage citizens to demand information about *what, how,* and *how well* educational programs are doing.

School administrators can use program evaluation technologies to describe and report to citizens upon the progress being made toward achieving results desired from the educational system. It is important to emphasize that only outcomes that can be reasonably measured in qualitative and quantitative terms should be assessed and evaluated.

Implementing PPBES

As a whole, PPBES is a complex, interrelated planning and budgeting system requiring new processes and administrative or managerial skills. Such systems can best be implemented by adopting a transitional process which makes changes deliberately and is accompanied by adequate staff training.

The move into PPBES must also acknowledge that traditional school administration concepts and practices must shift to the management style that is developing in education—one which suggests substantial change and impact in school administration in its own right. Presently, there seems to be a new sensitivity to the practices from the business sector that have been largely ignored by education administrators. The new emphasis includes outcome and process evaluation and probably means that the public will hold administrators accountable for their managerial performance to produce the results for which human and financial resources have been budgeted.

Knezevich[4] indicated that school administrators needed to become skilled in systems technology in order to fulfill the evolving managerial role in educational administration. Ten years later, it is apparent this prediction has not been completely fulfilled; however, there has been progress toward this end. Increasingly, educators identify goals and objectives, emphasize outcomes (competencies), utilize evaluation methodologies to assess effectiveness, and utilize analysis and planning in their role.

The adoption of the new Wisconsin school district accounting system in 1980-81 will make accounting by program and function rather than objects an accepted practice. A greater involvement of the public in all likelihood will sharpen the decisionmaking processes of school officials, and the new functional accounting system will be only one of the tools districts can use to develop individualized PPBES systems to meet their needs. By itself, an accounting system is not a PPBES system, and it should not be viewed as such.

Summary

The preceding discussion has identified some of the concepts and components of planning, programming, budgeting, and evaluating systems. Among the strengths of these new systems are greater involvement of persons affected by educational programs, greater precision to identify needs and design strategies to meet them, allocation of resources to programs and priorities rather than objects, and evaluation of processes and outcomes. The adoption of such systems will enhance educational decisionmaking and accommodate a greater emphasis upon management. Planning, programming, budgeting, and evaluating systems can be a means to budgeting reform and improvement.

Footnotes

1. Charles W. Foster, ed., *Educational Resources Management System* (Chicago: Research Corporation of the American Association of School Business Officials, 1971), p. 18.

2. Phyllis Hawthorne, ed., *Legislation by States: Accountability and Assessment in Education*, Report No. 2, Cooperative Accountability Project (Madison: Wisconsin Department of Public Instruction, August 1973).

3. U.S. Congress, House, Committee on Education and Labor, *Report to Accompany H.R. 69*, 93rd Congress, 2nd Session, House Report 93-805, p. 6.

4. Stephen J. Knezevich, *Administration of Public Education*, 2nd Edition (New York: Harper and Row, 1969).

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